

Product datasheet

Anti-beta Catenin antibody [rCTNNB1/2173] - BSA and Azide free ab237825

Recombinant

4 Images

Overview

Product name	Anti-beta Catenin antibody [rCTNNB1/2173] - BSA and Azide free
Description	Mouse monoclonal [rCTNNB1/2173] to beta Catenin - BSA and Azide free
Host species	Mouse
Tested applications	Suitable for: ICC/IF, Protein Array, IHC-P
Species reactivity	Reacts with: Human
Immunogen	Recombinant full length protein corresponding to Human beta Catenin aa 1 to the C-terminus. Database link: P35222
	Run BLAST with Run BLAST with
Positive control	IHC-P: Human breast cancer tissue. ICC/IF: HeLa cells.
General notes	<p>ab237825 is the carrier-free version of ab237983.</p> <p>Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.</p> <p>Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes

Purity	Protein A/G purified
Purification notes	Purified from bioreactor concentrate.
Clonality	Monoclonal
Clone number	rCTNNB1/2173
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab237825 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use a concentration of 1 - 2 µg/ml.
Protein Array		Use at an assay dependent concentration.
IHC-P		Use a concentration of 1 - 2 µg/ml. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 10-20 min followed by cooling at RT for 20 minutes. Incubate with primary antibody for 30 mins at RT.

Target

Function	<p>Key downstream component of the canonical Wnt signaling pathway. In the absence of Wnt, forms a complex with AXIN1, AXIN2, APC, CSNK1A1 and GSK3B that promotes phosphorylation on N-terminal Ser and Thr residues and ubiquitination of CTNNB1 via BTRC and its subsequent degradation by the proteasome. In the presence of Wnt ligand, CTNNB1 is not ubiquitinated and accumulates in the nucleus, where it acts as a coactivator for transcription factors of the TCF/LEF family, leading to activate Wnt responsive genes.</p> <p>Involved in the regulation of cell adhesion. The majority of beta-catenin is localized to the cell membrane and is part of E-cadherin/catenin adhesion complexes which are proposed to couple cadherins to the actin cytoskeleton.</p>
Tissue specificity	Expressed in several hair follicle cell types: basal and peripheral matrix cells, and cells of the outer and inner root sheaths. Expressed in colon.
Involvement in disease	<p>Defects in CTNNB1 are associated with colorectal cancer (CRC) [MIM:114500].</p> <p>Note=Activating mutations in CTNNB1 have oncogenic activity resulting in tumor development. Somatic mutations are found in various tumor types, including colon cancers, ovarian and prostate carcinomas, hepatoblastoma (HB), hepatocellular carcinoma (HCC). HBs are malignant embryonal tumors mainly affecting young children in the first three years of life.</p> <p>Defects in CTNNB1 are a cause of pilomatixoma (PTR) [MIM:132600]; a common benign skin tumor.</p> <p>Defects in CTNNB1 are a cause of medulloblastoma (MDB) [MIM:155255]. MDB is a malignant, invasive embryonal tumor of the cerebellum with a preferential manifestation in children.</p> <p>Defects in CTNNB1 are a cause of susceptibility to ovarian cancer (OC) [MIM:167000]. Ovarian</p>

cancer common malignancy originating from ovarian tissue. Although many histologic types of ovarian neoplasms have been described, epithelial ovarian carcinoma is the most common form. Ovarian cancers are often asymptomatic and the recognized signs and symptoms, even of late-stage disease, are vague. Consequently, most patients are diagnosed with advanced disease. Note=A chromosomal aberration involving CTNNB1 is found in salivary gland pleiomorphic adenomas, the most common benign epithelial tumors of the salivary gland. Translocation t(3;8) (p21;q12) with PLAG1.

Sequence similarities

Belongs to the beta-catenin family.
Contains 12 ARM repeats.

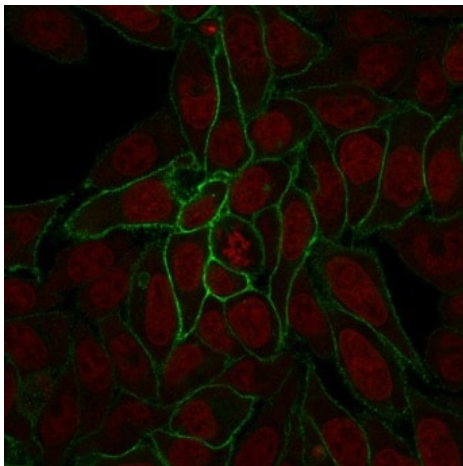
Post-translational modifications

Phosphorylation by GSK3B requires prior phosphorylation of Ser-45 by another kinase. Phosphorylation proceeds then from Thr-41 to Ser-37 and Ser-33. EGF stimulates tyrosine phosphorylation. Phosphorylation on Tyr-654 decreases CDH1 binding and enhances TBP binding. Ubiquitinated by the SCF(BTRC) E3 ligase complex when phosphorylated by GSK3B, leading to its degradation. Ubiquitinated by a E3 ubiquitin ligase complex containing UBE2D1, SIAH1, CACYBP/SIP, SKP1, APC and TBL1X, leading to its subsequent proteasomal degradation.

Cellular localization

Cytoplasm. Nucleus. Cytoplasm > cytoskeleton. Cell junction > adherens junction. Cell junction. Cell membrane. Cytoplasmic when it is unstabilized (high level of phosphorylation) or bound to CDH1. Translocates to the nucleus when it is stabilized (low level of phosphorylation). Interaction with GLIS2 and MUC1 promotes nuclear translocation. Interaction with EMD inhibits nuclear localization.

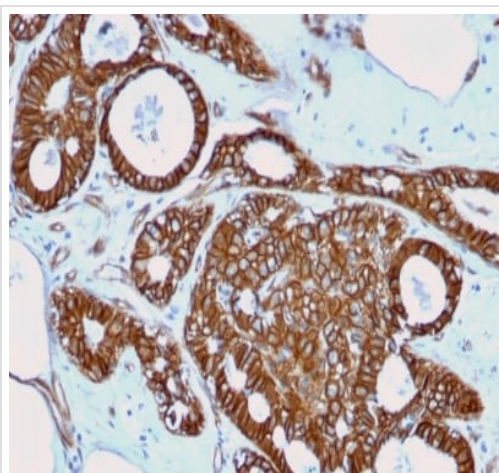
Images



Immunocytochemical/immunofluorescent analysis of HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling beta Catenin (Green) using [ab237983](#) at 2 µg/mL. The nuclei are stained in red.

This data was produced with [ab237983](#), the same antibody in a different formulation with BSA and Azide.

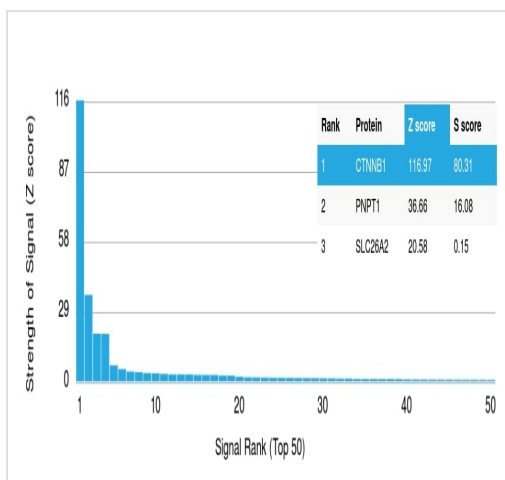
Immunocytochemistry/ Immunofluorescence - Anti-beta Catenin antibody [rCTNNB1/2173] - BSA and Azide free (ab237825)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta Catenin antibody [rCTNMB1/2173] - BSA and Azide free (ab237825)

Formalin-fixed, paraffin-embedded human breast cancer tissue stained for beta Catenin antibody using **ab237983** at 2 µg/ml in immunohistochemical analysis.

This data was produced with **ab237983**, the same antibody in a different formulation with BSA and Azide.



Protein Array - Anti-beta Catenin antibody (ab237825)

This data was produced with **ab237983**, the same antibody in a different formulation with BSA and Azide.

ab237983 was tested in protein array against over 19000 different full-length human proteins.

Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (MAb) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProt™ array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProt™ are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a MAb to its intended target.

A MAb is specific to its intended target if the MAb has an S-score of at least 2.5. For example, if a MAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that MAb to protein X is equal to 29.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

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